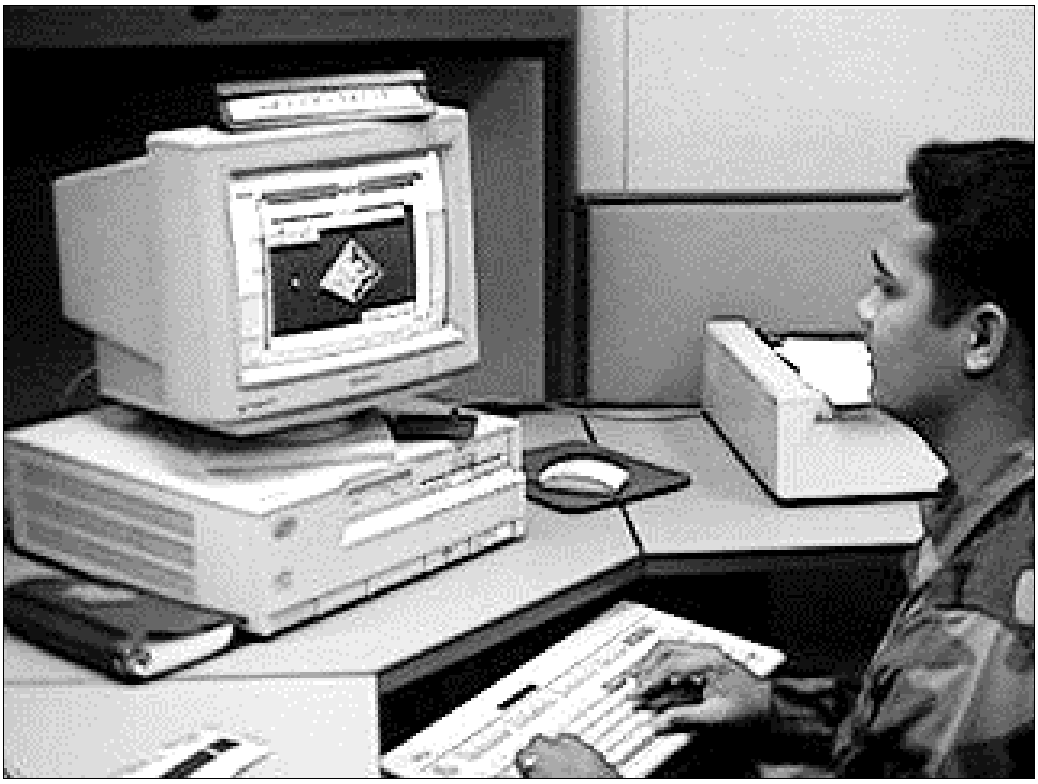
INTEGRATED MAINTENANCE DATA SYSTEM (IMDS)



Air Force ACAT IAM Program		**Prime Contractor**
Total Number of Systems:	200 Sites	Andersen Consulting
Total Program Cost (TY$):	$202M	
Average Unit Cost (TY$):	$1M	
Full-rate production:	FY01	

SYSTEM DESCRIPTION & CONTRIBUTION TO JOINT VISION 2010

The Integrated Maintenance Data System (IMDS) will be the standard Air Force system for maintenance information. All maintenance information should be accessible for collection, storage, and dissemination of critical data for repair and improvement of Air Force weapon systems and equipment. IMDS functions as a single logical data base that accesses historical and legacy data currently stored in other data bases. The design of IMDS is flexible to support changes in logistics infrastructure size, quantity, and mission orientation, whether at home base or deployed. IMDS flexibility allows unit-level selection of system functions.

A single integrated data base structure places maximum emphasis on data retrieval by weapons systems and supports response time requirements. Application programs operate in decentralized modules that maintain appropriate levels of support despite losses of higher-level computer interfaces. This gives any unit-level operation the essential data needed to continue vital maintenance functions during deployed operations.

Although the initial acquisition strategy called for IMDS software to be based upon the implementation of a Commercial-Off-The-Shelf package, a package named Government On-line Data was later selected. The program office has since changed their approach for Increments 1-3 to use a different version of this custom software. However, the Government On-line Data package is a leading contender for Increments 4-6.

IMDS supports ***Joint Vision 2010*** in the area of ***focused logistics*** by providing additional visibility and improved accuracy and dissemination of maintenance information.

BACKGROUND INFORMATION

By the early 1990s, the Air Force's legacy maintenance information systems were proving inadequate. They were inflexible, error prone, and costly. They also lacked the performance and functionality to support the Air Force transition to a more flexible, expeditionary force adept in rapid deployment and employment.

A Program Management Directive in May 1995 led to the formation of the present IMDS Program. A subsequent system decision memorandum was issued in January 1996. IMDS is an evolutionary program that will be fielded through a series of six increments—each building on the previous one.

IMDS will be placed under the cognizance of the Global Combat Support System–Air Force (GCSS-AF) program after each completes IOT&E (scheduled in 4QFY00 for IMDS and 3QFY00 for GCSS-AF). Thereafter, IMDS will be managed under GCSS-AF.

TEST & EVALUATION ACTIVITY

Contractor-based beta testing activities began in July 1997 to mitigate risk and assess the maturity of the system prior to conducting OT&E. This early look at the initial increment of the IMDS program indicated that there was significant functionality missing which needed to be added. The development strategy has since been restructured to develop the core system (consisting of the initial Increments 1-3) and prepare for IOT&E of the core system. The core system Milestone III and fielding are now planned in January 2001. Increment 2 of IMDS was delivered to the beta test site in July 1998 to obtain user feedback on functionality and performance. Many areas needing improvement were found, and the product was modified accordingly; however, user confidence has suffered. No beta testing was conducted for Increment 3. The formal developmental testing began September 27, 1999, and continues until February 2000. After the core system is tested, the program office plans to operationally test and field new increments of IMDS annually through Increment 6. A draft TEMP is currently in staffing.

TEST & EVALUATION ASSESSMENT

The program office is relying on contractor-conducted DT, corroborated and augmented by integration testing conducted by a permanent users group and members of the Combined Test Force. The Combined Test Force plans to conduct an operational field test as a "dry run" in May and June 2000, prior to OT&E. The increasing level of risk for this program is a concern. The risk is increasing due to significant beta test problems for Increment 2, lack of beta testing on Increment 3, and the shift from

packaged Government On-line Data to custom software development. However, even with these problems, IMDS appears to be better suited for information retrieval than the legacy system. DOT&E is currently working with the program office to define the scope of IMDS IOT&E.